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CH2MHILL

December 3, 2004

Mr. Enrique Manzanilla
U.S. Environmental Protection Agency
75 Hawthorne Street, CMD-4-2
San Francisco, CA 94105

Subject: Application for Risk-based Disposal Approval for Polychlorinated Biphenyls at Building 840 UL#01 In Investigation Area C3 on the Eastern Early Transfer Parcel of Mare Island Where No Further Action is Required under the United States Environmental Protection Agency Consent Agreement and Final Order

Dear Mr. Manzanilla:

CH2M HILL prepared this letter in compliance with the Consent Agreement/Final Order (CA/FO) between United States Environmental Protection Agency (USEPA) and the United States Department of the Navy (Navy), with the City of Vallejo and Lennar Mare Island (LMI) as intervenors (USEPA et al. 2001). The CA/FO sets forth the polychlorinated biphenyl (PCB)-related requirements that must be met to satisfy the Toxic Substances Control Act (TSCA) for the Eastern Early Transfer Parcel (EETP) of Mare Island.

Pursuant to Paragraph 6(a) of the CA/FO, this letter demonstrates that, under TSCA, a no further action (NFA) determination is appropriate with respect to PCB contamination as part of the overall regulatory closure process of the EETP for Building 840 on the LMI property of Mare Island. This letter is submitted in compliance with Paragraph 12 of the CA/FO. An NFA determination is appropriate for the PCB site addressed in this letter based on a site-specific risk evaluation.

PCB Site Identification

From conducting visual site surveys and review of historical records, building closure reports, and databases of electrical equipment, the Navy identified PCB sites where PCB-containing equipment was located, PCB spills were documented, or contamination was suspected because of building history or visible stains (Tetra Tech Environmental Management, Inc. [TtEMI] 1998). Navy personnel from Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS) conducted interim PCB assessments and performed cleanup actions (e.g., washing, scabbling, and excavation) in accordance with Technical Work Documents, where necessary. Following the SSPORTS interim PCB assessments and any cleanup actions, TtEMI personnel collected confirmation samples either to confirm SSPORTS findings that no cleanup was necessary or to determine the effectiveness of the cleanup actions.

Building 840, an Electrical Distribution Center built in 1942, is located west of Dry Dock 3 in Investigation Area (IA) C3. The building is located in the EBS Parcel 05-K in an area for industrial land use, according to the *Preliminary Land Use Plan* (LMI 2000). According to CH2M HILL's site visit in September 2004, the building is a fenced outdoor area with no roof. Attachment A presents photographs of the site. Figure 1 shows the previous sample locations at Building 840 Unknown Location (UL)#01.

Building 840 currently has four transformers (T) and two rocker arms (RA) (Figure 1). T-1433 was installed in January 1956and is a dry transformer (i.e., does not contain oil). T-1675 through T-1677 were installed January 1986 and the oil has PCB levels less than 2 parts per million. RA-114 and RA-116 both contain 130 gallons of oil with a PCB concentration of 1 part per million. Building 840 formerly contained transformers T-0686 through T-0691, which were used between January 1940 and March 1984, and had PCB levels ranging from 7.4 to 146 parts per million, with oil volumes ranging from 140 to 180 gallons (Navy 1996).

PCBs were detected above the laboratory reporting limit in one of the seven concrete samples (a duplicate sample). The maximum PCB concentration is 3.9 milligrams per kilogram (mg/kg) at Building 840 UL#01. The average total PCB concentration at Building 840 UL#01 (using all previous data and half of the reporting limit when PCBs were not detected) is 1.07 mg/kg. Because PCB concentrations are greater than 1 mg/kg at this site (the CA/FO default substantive cleanup requirement for high-occupancy areas), we are submitting this risk-based application for site closure for PCB site Building 840 UL#01.

As required by 40 CFR 761.61(c), this Application for Risk-based Disposal Approval contains the information required by 40 CFR 761.61(a)(3):

- Nature of contamination
- Sampling procedures and results
- Location and extent of contaminated area
- Cleanup plan
- Certification

The following sections provide the required information in each of these categories.

Nature of Contamination – 40 CFR 761.61(a)(3)(i)(A)

PCBs have only been detected in one out of six concrete samples collected from Building 840 UL#01 at a concentration of 3.9 mg/kg (a SSPORTS interim assessment sample). No cleanup actions have been performed at Building 840 UL#01.

Sampling Procedures and Results – 40 CFR 761.61(a)(3)(i)(B)

Table 1 provides a summary of the previous sampling at Building 840 UL#01. This table includes the sample numbers, matrix, sample date, and total PCB concentrations (the

laboratory reporting limit is provided when PCBs were not detected). Attachment B includes analytical data from the previous sampling event at this site.

Building 840 UL#01 was inspected on September 23, 1996. Although no PCB-related problems were noted, this electrical substation once contained transformers with elevated levels of PCBs and, therefore, six concrete samples were collected (SSPORTS 1997). PCBs were detected in only one of the six samples above laboratory reporting limits (Table 1). The PCB concentration of sample number 7125-0033 was 3.9 mg/kg; and PCBs were not detected above the laboratory reporting limit of 1 mg/kg in a duplicate sample from the same location.

Location and Extent of Contaminated Area – 40 CFR 761.61(a)(3)(i)(C)

PCBs were detected above the laboratory reporting limit in only one of the six concrete samples from Building 840 UL#01. However, PCBs were not detected above the laboratory reporting limit of 1 mg/kg in a duplicate sample from the same location. In addition, one sample collected adjacent to the location with the 3.9 mg/kg result did not contain PCBs above the laboratory reporting limit. When using all of the previous concrete data (with half of the laboratory reporting limit for the non-detect samples), the average PCB concentration at Building 840 UL#01 is 1.07 mg/kg.

Cleanup Plan – 40 CFR 761.61(a)(3)(i)(D)

The *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2003) describes the process for PCB site closure under TSCA in accordance with the CA/FO. In compliance with this process, Figure 2 provides a flowchart illustrating the PCB site closure process for Building 840 UL#01. No cleanup action is necessary at this site based on the results of a site-specific risk evaluation.

The samples at Building 840 UL#01 were collected during May 1997 (Table 1). When using all of the previous concrete data, including field duplicate samples (with half of the laboratory reporting limit for the non-detect samples), the average PCB concentration at Building 840 UL#01 is 1.07 mg/kg. The maximum PCB concentration detected was 3.9 mg/kg in a field duplicate sample. Because this PCB concentration exceeds the CA/FO default substantive cleanup requirement of 1 mg/kg for high-occupancy areas, a site-specific risk evaluation was conducted for this site.

A range of risk values was calculated for Building 840 UL#01 because PCBs were not detected in the normal samples above laboratory reporting limits, but were detected in the one field duplicate sample above 1 mg/kg. The exposure point concentration (EPC) (95 percent upper confidence limit for the mean) for the total PCB concentrations at Building 840 UL#01 is 0.5 mg/kg using only the concentrations of PCBs in the normal samples (USEPA 2003). Based on this EPC, the estimated potential cumulative cancer risk for PCBs in an industrial setting at Building 840 UL#01 is 7×10^{-7} (EPC for total PCBs

divided by the preliminary remediation goal (PRG) for cancer effects times 10^{-6} = [0.5/0.74] x 10^{-6}), and the hazard index is less than 1 (EPC for Aroclor-1254 divided by the PRG for non-cancer effects = 0.5/11 = 0.04).

PCB concentrations from duplicate samples are not typically used in the risk evaluation. However, the PCB concentration in the duplicate sample collected from Building 840 UL#01 was used because it was the only detected PCB concentration at this site. The EPC for the total PCB concentrations at Building 840 UL#01 is 3.9 mg/kg using the maximum detected concentration (USEPA 2003). Using this EPC, the estimated potential cumulative cancer risk for PCBs in an industrial setting at Building 840 UL#01 is 5 x 10^{-6} (EPC for total PCBs divided by the PRG for cancer effects times 10^{-6} = [3.9/0.74] x 10^{-6}), and the hazard index is less than 1 (EPC for Aroclor-1254 divided by the PRG for non-cancer effects = 3.9/11 = 0.35).

Therefore, the estimated potential cumulative cancer risk for PCBs in an industrial setting at Building 840 UL#01 ranges from 5 x 10^{-6} to 7 x 10^{-7}. The non-cancer hazard index for this site ranges from 0.04 to 0.35.

This methodology for estimating potential risks associated with exposure to PCBs in concrete most likely results in an overestimate of potential risks. The PRG used for comparison is based on soil exposure and includes the inhalation, dermal contact, and ingestion exposure routes. For each one of these routes, the exposure assumptions for intake of PCBs in soil likely overestimate intake of PCBs in concrete for the following reasons:

1. Inhalation – Fine particles containing PCBs are not as readily available for resuspension from asphalt/concrete as from soil.
2. Dermal Contact – PCBs in concrete are located on floors where regular dermal contact is not anticipated; fine concrete particles are not as available as fine soil particles for adherence to skin resulting in dermal absorption; and fine particles of concrete are less likely to adhere to skin as soil particles.
3. Ingestion – Fine particles are not as available from concrete as soil for hand to mouth contact resulting in incidental ingestion of PCBs.

Certification – 40 CFR 761.61(a)(3)(i)(E)

Project files for Building 840 UL#01 are located in the CH2M HILL Office in Oakland, California. This office is located at 155 Grand Avenue, Suite 1000. Attachment C contains the written certification, signed by LMI (the owner of the property where the cleanup site is located) and CH2M HILL (the party conducting the cleanup), documenting that all sampling plans and procedures used to assess or characterize the PCB contamination at the cleanup site are on file at the above-mentioned location and are available for USEPA inspection.

Conclusions

PCBs were not detected above a concentration of 1 mg/kg in five out of the six samples collected during May 1997 from the concrete floor of Building 840. The average PCB concentration in the samples collected from Building 840 UL#01 (using all previous data and half of the reporting limit when PCBs were not detected) is 1.07 mg/kg. The only detected PCB concentration was 3.9 mg/kg in a field duplicate sample. Because this PCB concentration exceeds the 1-mg/kg high-occupancy cleanup level under TSCA, a site-specific risk evaluation was conducted for this site. The risk evaluation of the concrete samples concludes that the estimated potential cumulative cancer risk for PCBs in an industrial setting at Building 840 UL#01 ranged from 5×10^{-6} to 7×10^{-7}. Consequently, we are requesting that, under TSCA, USEPA issue an NFA determination for Building 840 UL#01.

These site-specific risk evaluation results demonstrate that potential cancer risks associated with exposure to residual PCBs at Building 840 UL#01 are at the lower end of the risk-management range generally used to determine if a cleanup action is necessary (1×10^{-4} to 1×10^{-6}). In addition, the range of non-cancer risk HIs is less than 1 (0.04 to 0.35). Based on the risk evaluation results and the conservative nature of the assumptions used in the risk calculations for this paved area, no cleanup actions for PCBs in building materials are necessary at Building 840 UL#01. The conditions for USEPA closure of PCB sites have been met for this site (Figure 2).

Please respond to this letter with confirmation that, in accordance with the approved *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2003) and the CA/FO (USEPA et al. 2001), under TSCA, NFA is appropriate for Building 840 UL#01. Please submit your approval of NFA for this site to me at the above address or via e-mail at jmorris1@ch2m.com. If you have any questions regarding the site addressed in this letter, please contact Carla Duncan at 775/329-7238, extension 220.

References

CH2M HILL. 2003. *Final Polychlorinated Biphenyl Work Plan*. March 7.

Lennar Mare Island (LMI). 2000. *Preliminary Land Use Plan*. May 23.

Supervisor of Shipbuilding, Conversion, and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS). 1997. *Interim Polychlorinated Biphenyl (PCB) Assessment for Zone 5 PWC Properties*. August 22.

Tetra Tech Environmental Management, Inc. (TtEMI). 1998. *Final Basewide Polychlorinated Biphenyl Confirmation Sampling Summary Report*. February 13.

United States Department of the Navy (Navy). *1996. PCB Transformers*. Table from the Caretaker Site Office. November 5.

United States Environmental Protection Agency (USEPA). 2003. *ProUCL User's Guide.* February.

United States Environmental Protection Agency (USEPA), United States Department of the Navy (Navy), the City of Vallejo, and Lennar Mare Island (LMI). 2001. *Complaint/Consent Agreement and Final Order between Lennar Mare Island, the City of Vallejo, the U.S. Department of the Navy, and the U.S. Environmental Protection Agency Region IX.* EPA Docket No. TSCA-9-2002-0002. December 20.

Sincerely,

CH2M HILL

Jeffery C. Morris, PE

Enclosures: Table 1, Figures 1 and 2, Attachments A, B, and C

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TABLE 1
Sample Results for Building 840 UL#01
Investigation Area C3, Lennar Mare Island, Vallejo, California

PCB Site Name	Site Description	Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Comments
Building 840 UL#01	Electrical Distribution Center	7125-0028	concrete	05/12/97	ND (< 1 mg/kg)	Adjacent to RA-116
		7125-0029	concrete	05/12/97	ND (< 1 mg/kg)	Adjacent to RA-114
		7125-0030	concrete	05/12/97	ND (< 1 mg/kg)	Adjacent to T-1675 (PCB level <2 mg/kg; post-10/1/85)
		7125-0031	concrete	05/12/97	ND (< 1 mg/kg)	Adjacent to T-1675 (PCB level <2 mg/kg; post-10/1/85)
		7125-0032	concrete	05/12/97	ND (< 1 mg/kg)	Between T-1675 and T-1676
		7125-0033	concrete	05/12/97	3.9 mg/kg	Aroclor-1260; duplicate of 7125-0032 between T-1675 and T-1676
		7125-0033	concrete	05/12/97	3.9 mg/kg	Aroclor-1260; duplicate of 7125-0032 between T-1675 and T-1676

mg/kg = milligrams per kilogram

ND = not detected above the laboratory reporting limit

UL = Unknown Location

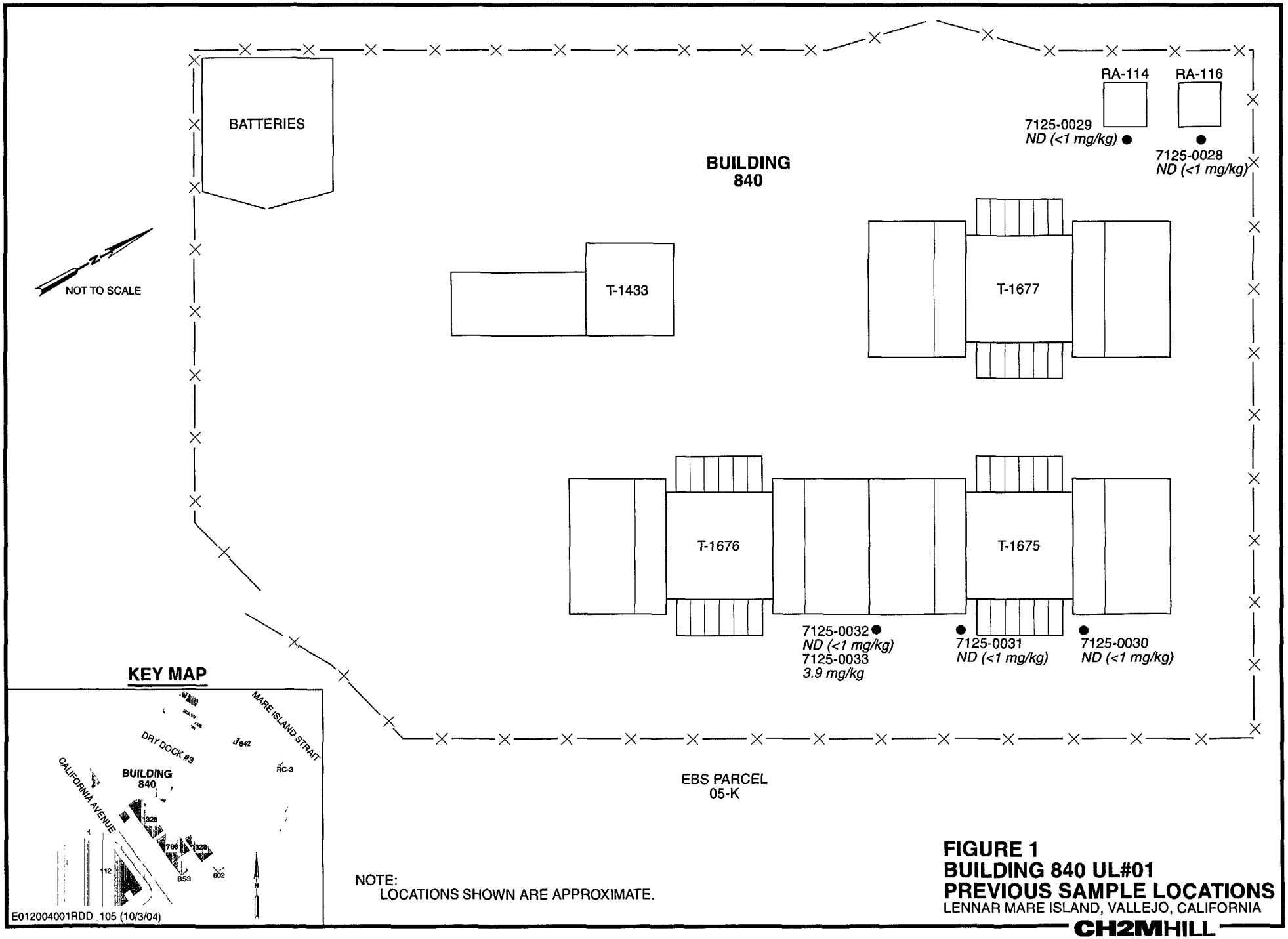

FIGURE 1
BUILDING 840 UL#01
PREVIOUS SAMPLE LOCATIONS
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

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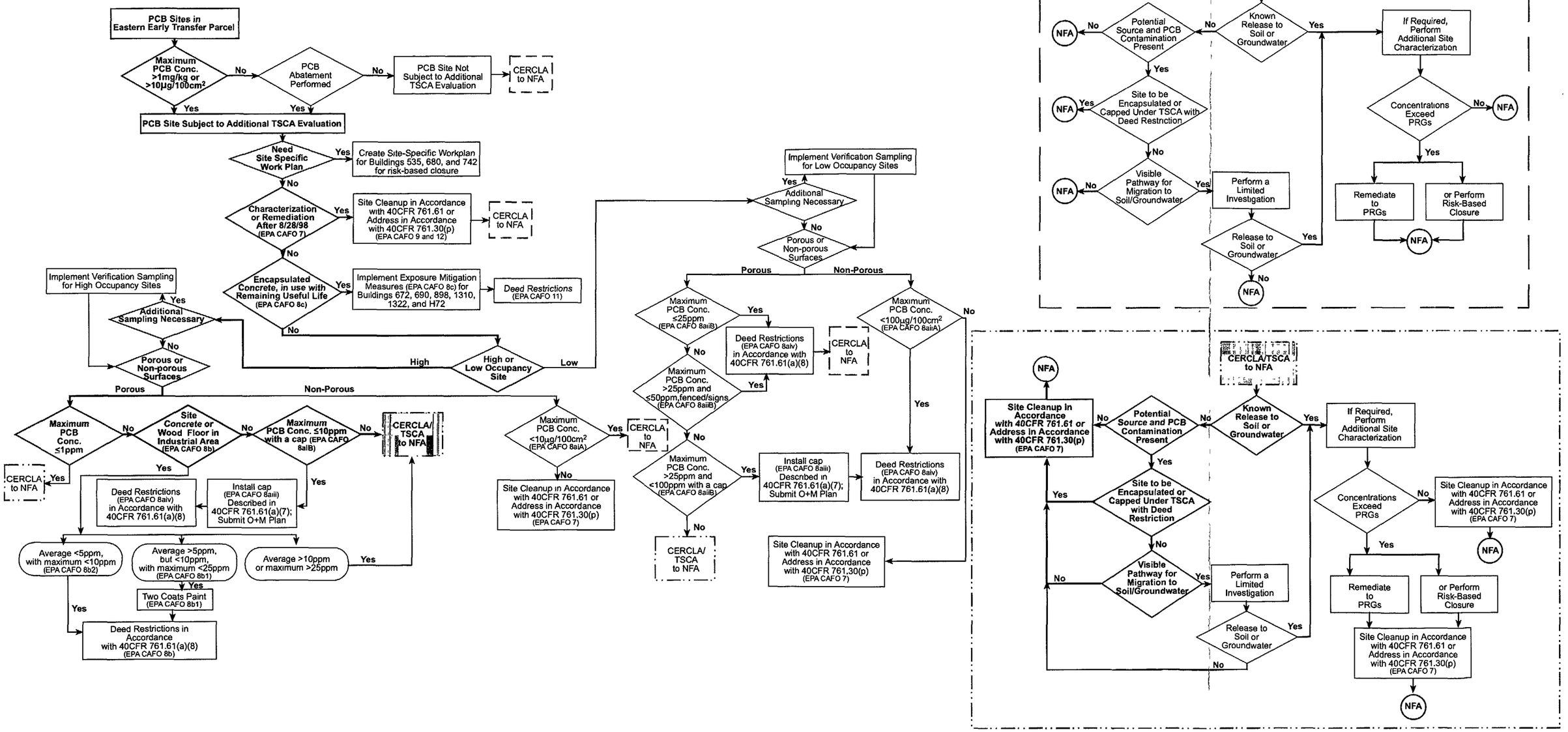

Notes: EPA CAFO # = EPA Consent Agreement and Final Order paragraph number

NFA = No further action

O+M = Operations and Maintenance

FIGURE 2
PATH FOR PCB SITE CLOSURE AT BUILDING 840 UL#01
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

Attachment A
Building 840 UL#01 – Photographs

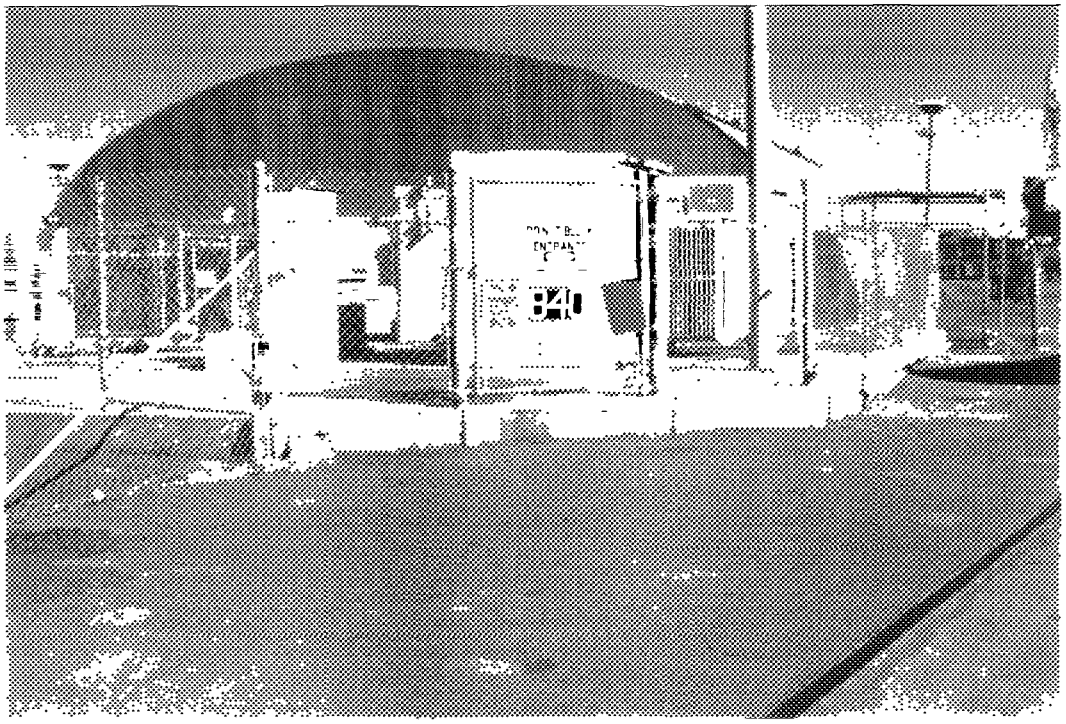

Photo 1. Building 840 UL#01, IA C3

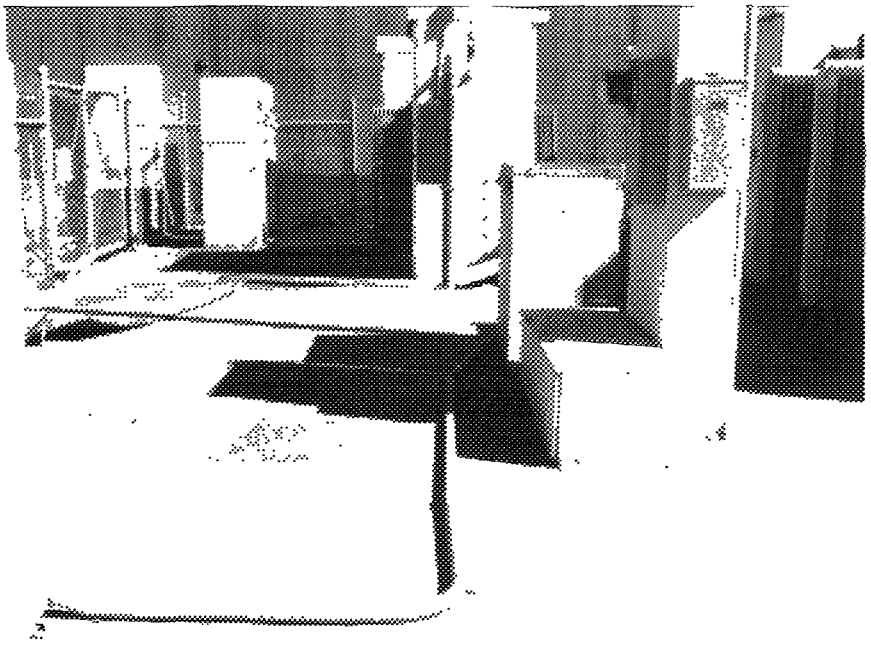

Photo 2. Concrete Floor Surface of Building 840 UL#01

Attachment B
Building 840 UL#01 – Analytical Data

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8081 PCBs Only

ACCREDITED

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	97-05-203		
QC Batch ID:	970516sn2	Date Collected:	05/12/97
Matrix:	Solid	Date Received:	05/16/97
Preparation:	EPA 3550A	Date Prepared:	05/16/97
Method:	EPA 8081	Date Analyzed:	05/17/97

Client Sample Number: **7125-0028 (05-K/bldg.840/sub.zone 5-sam.pt.#22)**
Lab Sample Number: 97-05-203-1

Parameter	Result	RL	Qualifiers	Units
Aroclor-1016	ND	1000		ug/kg
Aroclor-1221	ND	1000		ug/kg
Aroclor-1232	ND	1000		ug/kg
Aroclor-1242	ND	1000		ug/kg
Aroclor-1248	ND	1000		ug/kg
Aroclor-1254	ND	1000		ug/kg
Aroclor-1260	ND	1000		ug/kg
Aroclor-1262	ND	1000		ug/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
Decachlorobiphenyl	122	50-130	
2,4,5,6-Tetrachloro-m-Xylene	112	50-130	

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8081 PCBs Only

ACCREDITED

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	97-05-203	Date Collected:	05/12/97
QC Batch ID:	970516sn2	Date Received:	05/16/97
Matrix:	Solid	Date Prepared:	05/16/97
Preparation:	EPA 3550A	Date Analyzed:	05/17/97
Method:	EPA 8081		

Client Sample Number: 7125-0029 (05-K/bldg.840/sub.zone 5-sam.pt.#23)
Lab Sample Number: 97-05-203-2

Parameter	Result	RL	Qualifiers	Units
Aroclor-1016	ND	1000		ug/kg
Aroclor-1221	ND	1000		ug/kg
Aroclor-1232	ND	1000		ug/kg
Aroclor-1242	ND	1000		ug/kg
Aroclor-1248	ND	1000		ug/kg
Aroclor-1254	ND	1000		ug/kg
Aroclor-1260	ND	1000		ug/kg
Aroclor-1262	ND	1000		ug/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	50-130	
2,4,5,6-Tetrachloro-m-Xylene	85	50-130	

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ANALYTICAL REPORT
EPA 8081 PCBs Only

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Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	97-05-203		
QC Batch ID:	970516sn2	Date Collected:	05/12/97
Matrix:	Solid	Date Received:	05/16/97
Preparation:	EPA 3550A	Date Prepared:	05/16/97
Method:	EPA 8081	Date Analyzed:	05/17/97

Client Sample Number: **7125-0030 (05-K/bldg.840/sub.zone 5-sam.pt.#24)**
Lab Sample Number: 97-05-203-3

Parameter	Result	RL	Qualifiers	Units
Aroclor-1016	ND	1000		ug/kg
Aroclor-1221	ND	1000		ug/kg
Aroclor-1232	ND	1000		ug/kg
Aroclor-1242	ND	1000		ug/kg
Aroclor-1248	ND	1000		ug/kg
Aroclor-1254	ND	1000		ug/kg
Aroclor-1260	ND	1000		ug/kg
Aroclor-1262	ND	1000		ug/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
Decachlorobiphenyl	98	50-130	
2,4,5,6-Tetrachloro-m-Xylene	92	50-130	

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Enclosure (3)
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ANALYTICAL REPORT
EPA 8081 PCBs Only

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Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	97-05-203		
QC Batch ID:	970516sn2	Date Collected:	05/12/97
Matrix:	Solid	Date Received:	05/16/97
Preparation:	EPA 3550A	Date Prepared:	05/16/97
Method:	EPA 8081	Date Analyzed:	05/17/97

Client Sample Number: 7125-0031 (05-K/bldg.840/sub.zone 5-sam.pt.#25)
Lab Sample Number: 97-05-203-4

Parameter	Result	RL	Qualifiers	Units
Aroclor-1016	ND	1000		ug/kg
Aroclor-1221	ND	1000		ug/kg
Aroclor-1232	ND	1000		ug/kg
Aroclor-1242	ND	1000		ug/kg
Aroclor-1248	ND	1000		ug/kg
Aroclor-1254	ND	1000		ug/kg
Aroclor-1260	ND	1000		ug/kg
Aroclor-1262	ND	1000		ug/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
Decachlorobiphenyl	104	50-130	
2,4,5,6-Tetrachloro-m-Xylene	94	50-130	

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8081 PCBs Only

ACCREDITED

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	97-05-203	Date Collected:	05/12/97
QC Batch ID:	970516sn2	Date Received:	05/16/97
Matrix:	Solid	Date Prepared:	05/16/97
Preparation:	EPA 3550A	Date Analyzed:	05/17/97
Method:	EPA 8081		

Client Sample Number: 7125-0032 (05-K/bldg.840/sub.zone 5-sam.pt.#26)
Lab Sample Number: 97-05-203-5

Parameter	Result	RL	Qualifiers	Units
Aroclor-1016	ND	1000		ug/kg
Aroclor-1221	ND	1000		ug/kg
Aroclor-1232	ND	1000		ug/kg
Aroclor-1242	ND	1000		ug/kg
Aroclor-1248	ND	1000		ug/kg
Aroclor-1254	ND	1000		ug/kg
Aroclor-1260	ND	1000		ug/kg
Aroclor-1262	ND	1000		ug/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
Decachlorobiphenyl	104	50-130	
2,4,5,6-Tetrachloro-m-Xylene	94	50-130	

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT
EPA 8081 PCBs Only

ACCREDITED

Client Name:	Mare Island Naval Shipyard		
Project ID:	Contract No. N00244-96-D-2009		
Work Order Number:	97-05-203		
QC Batch ID:	970516sn2	Date Collected:	05/12/97
Matrix:	Solid	Date Received:	05/16/97
Preparation:	EPA 3550A	Date Prepared:	05/16/97
Method:	EPA 8081	Date Analyzed:	05/17/97

Client Sample Number: 7125-0033 (05-K/bldg.840/sub.zone 5-sam.pt.#26)
Lab Sample Number: 97-05-203-6

Parameter	Result	RL	Qualifiers	Units
Aroclor-1016	ND	1000		ug/kg
Aroclor-1221	ND	1000		ug/kg
Aroclor-1232	ND	1000		ug/kg
Aroclor-1242	ND	1000		ug/kg
Aroclor-1248	ND	1000		ug/kg
Aroclor-1254	ND	1000		ug/kg
Aroclor-1260	3900	1000		ug/kg
Aroclor-1262	ND	1000		ug/kg

Surrogates:	REC (%)	Control Limits	Qualifiers
Decachlorobiphenyl	105	50-130	
2,4,5,6-Tetrachloro-m-Xylene	98	50-130	

Zone 5 PWC Release
Enclosure (3)
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Attachment C
Certification

Attachment C - Certification

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the polychlorinated biphenyl (PCB) contamination at Building 840 Unknown Location (UL#01) are on file at the CH2M HILL Office located at 155 Grand Avenue in Oakland, California. These files are available for USEPA inspection.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Joshua Sternberg, Lennar Mare Island (the owner of the property where the cleanup site is located)

Jeffery C. Morris, PE/CH2M HILL (the party conducting the cleanup)